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ABSTRACT

The Transfer Success Work Group was established by the Texas Higher Education Coordinating Board (THECB) and the Texas Association of Junior and Community College Instructional Administrators to investigate the effectiveness of the state's public community college transfer function and make recommendations for improving transfer efficiency. The Work Group identified common barriers to transfer from national research and examined transfer outcomes for Texas public community colleges as of 1994. For students who entered in 1990, it was determined that college transfer rates in Texas were comparable to other colleges in nationwide transfer studies, falling between 22% and 32%, depending upon the definition of transfer utilized. It was also found that 85% of students who transferred from Texas colleges enrolled in the receiving institution for a second semester. The Groups also conducted a survey of 75 instructional administrators and student support personnel at 53 institutions in the state, revealing that while an effective system to track transfer students and outcomes was rated as the third most important factor in transfer success, it ranked 27th among factors actually in place. Similar discrepancies were found with respect to feedback from senior institutions (provided at 57% of the colleges) and electronic transfer of transcripts (utilized by only 35% of the respondents). Finally, the Work Group developed 15 recommendations for state community colleges and the THECB related to the need to track and follow-up on student goals, retention, progress, completion, and transfer and to promote increased cooperation between two- and four-year colleges. (Contains 24 references.) (KP)

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TRANSFER SUCCESS WORK GROUP REPORT

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A REPORT BY THE TEXAS ASSOCIATION OF JUNIOR AND COMMUNITY COLLEGE INSTRUCTIONAL ADMINISTRATORS (TAJCCIA)

APRIL 1995

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FOREWORD

In May 1994, the Assistant Commissioner of the Community and Technical Colleges Division of the Texas Higher Education Coordinating Board (THECB), Robert E. Lahti, requested the Program Director for Academic Affairs, Charles M. Cook, to develop a concept paper examining the transfer function in Texas public community and technical colleges.

In July 1994, Lahti met with Susan McBride, President of the Texas Association of Junior and Community College Instructional Administrators (TAJCCIA), to draft the purpose and tasks for a work group of instructional leaders from around the state examining transfer success. They identified and contacted members of the TAJCCIA to serve on the work group.

Linda Timmerman, Dean of Academic Services at Navarro College, agreed to serve as the Chairperson of the resultant Transfer Success Work Group. The members of the work group met and collaborated from August 1994 to January 1995 to produce this report.

The contributing authors of this report include Linda Timmerman, Collette Hilliard, Don Pugh, David Preston, Richard Bailey, Stan Adelman, and Charles Cook. The work group wishes to give special thanks and acknowledgment to Assistant Commissioner Robert E. Lahti for his leadership; Martha Smalley, Patrice Lieb, and David Mead for their help with typing and graphics; and to Kathy Benson of Automated Information Services, Administration Division of the THECB, for her counsel and help in designing and retrieving the data offered in the transfer rate presentations contained in this report.

TRANSFER SUCCESS WORK GROUP

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TRANSFER SUCCESS WORK GROUP

PURPOSE

The primary purpose of the Transfer Success Work Group is to assure that the transfer function in Texas public community colleges is providing students increased pathways to success in their academic and career development and to make recommendations concerning strategies and methods that will improve the efficiency and effectiveness of student transfer.

TASKS

1. Review the literature concerning the transfer function in public community and technical colleges to identify successful strategies and possible barriers to transfer effectiveness.

2. Identify and define indicators to assess the effectiveness of the transfer function, including:

   (a) the rate of transfer of students from Texas public community colleges to Texas public four-year institutions;

   (b) the rate of transfer of students at different stages of academic progress in the community college; and

   (c) the academic success and persistence rates of transfer students in four-year institutions.

3. Survey leaders in instruction and student services at Texas public community and technical colleges to determine current practices and perceptions regarding transfer success.

4. Develop and recommend guidelines that might be helpful for individual public community colleges to follow in a process of on-going assessment and improvement of their transfer function.

5. Recommend guidelines/processes for statewide assessment and improvement of the transfer function in Texas public community and technical colleges.

EXECUTIVE SUMMARY

An effective transfer function in Texas' public community and technical colleges (CTCs) ensures that students have clear pathways to success in their academic and career development. Transfer effectiveness results from assessment, feedback, and subsequent improvement of the transfer function.

Some of the major findings of this study include:

- The CTCs of Texas have comparable transfer rates to others identified in nationwide studies (22-32 percent, depending upon the definition of "transfer student" used in a particular study).
- Most (85 percent) students who transfer from Texas CTCs enroll for a second semester at the senior institution.
- Studies at selected Texas CTCs indicate that students who persist and achieve higher stages of academic progress in the CTCs are progressively more likely to transfer and achieve academic progress in the senior institutions.
- In the opinion of Texas CTC instructional and student support leaders, there are noteworthy discrepancies between what factors currently exist and what should exist at Texas CTCs to ensure transfer success of students (e.g., perceived needs for more effective tracking systems; electronic exchange of transcripts; greater feedback from senior institutions, etc.)

The report recommends that individual CTCs:

- devise measures to keep track of and follow-up on students' goals as well as rates of students' retention, progress, completion, and transfer.
- commit themselves to full provision of student services and activities which promote student interest in and accomplishment of successful transfer.

The report recommends that the THECB:

- promote increased partnerships between two-year and four-year colleges;
- facilitate the transfer of core curricula;
- serve as the clearinghouse for the electronic exchange of transcripts;
- promote the upgrading of colleges' technological infrastructure and expertise;
- promote uniform reporting systems from four-year to two-year colleges on transfer students;
- encourage full adoption of the Texas Common Course Numbering System; and
- encourage full participation by four-year colleges in the Transfer Guides Project.

I. THE TRANSFER FUNCTION IN TEXAS COMMUNITY COLLEGES

A. CONTEXT FOR STUDY: TRANSFER IS ONE OF MANY FUNCTIONS OF THE COMMUNITY COLLEGE.

One of the most important functions of the community college is the offering of freshman and sophomore academic courses to students who plan to transfer to a four-year institution to complete a baccalaureate degree. Before the effectiveness of this function may be meaningfully discussed, however, it is important to place it in a proper context as one of many functions in the mission of a comprehensive community college.

In addition to preparing students for transfer, the community college provides for other academic, vocational/technical, developmental/remedial, student support, and continuing education courses, programs and services. All of these are intended to provide students with accessible, affordable, and quality experiences for educational development and growth.

B. THE BACKGROUNDS AND GOALS OF STUDENTS AT TEXAS COMMUNITY COLLEGES ARE DIVERSE.

Texas community colleges maintain open-door admissions policies. Anyone who is at least 18 years old or possesses a high school diploma, GED certificate, or notarized record of equivalent home schooling may enter a community college. Many community colleges also provide adult basic education for those who dropped out and never completed their public schooling and English as a second language (ESL) training to those who immigrated here from foreign countries. For many Texans, community colleges provide their last, best chance for work force education. These broad functions benefit the well-being and economic development of the state by providing more literate, skilled, and productive citizens and workers.

Students enter community colleges from a wide variety of backgrounds, ages, interests, and abilities. Many are unprepared for college-level transfer work and many do not have clearly defined or realistic goals. Others never intend to transfer, choosing instead courses or programs for specific training needs or personal interest. For example, a student may seek an Associate of Applied Science (AAS) degree in an allied health care field intended for employment rather than transfer. In another example, a student may already hold a four-year degree, but return to the community college for training in application of a new software.

While the transfer function is one of many functions in today's community college, it used to be the predominant one. A review of the literature suggests that the nature of the transfer function has changed over the last two decades and is perhaps in need of refinement once again.

C. REVIEW OF THE LITERATURE: THE NATURE OF THE TRANSFER FUNCTION HAS CHANGED OVER THE LAST TWO DECADES AND TRANSFER POLICIES ARE IN NEED OF REVISION.

During the last two decades, the traditional transfer function of the community college has undergone significant change. The numbers of associate degree graduates have dropped, but the numbers of students seeking transfer opportunities are increasing. State funds for higher education have been consistently constrained while public demands for higher education's accountability have intensified.

Enrollment patterns have become more fluid, with students "stopping out" for employment, concurrently enrolling in multiple institutions, or reverse transferring from four-year to two-year colleges. Community colleges across the nation have difficulty agreeing upon common definitions for "transfer student" and "transfer rate." This confusion hampers community colleges in efforts to provide sound institutional planning and clarify public debate concerning transfer issues (Barkley, 1993).

Some critics charge that students entering community colleges today and desiring the baccalaureate degree are less likely to achieve their goal than students with similar characteristics entering four-year colleges (Brint & Karabel, 1989). This charge has significant social and economic implications, especially considering the fact that a disproportionate and growing number of minority students seeking higher education initially enroll in community colleges. To help students and to counter critics, community colleges must do a better job of identifying student goals and tracking student progress toward accomplishment of those goals, particularly with regard to transfer success.

RECOMMENDATION 1: Texas community and technical colleges must collect and maintain data to identify specific problems and improve results of student transfer from two-year to four-year colleges.

RECOMMENDATION 2: The Texas Higher Education Coordinating Board (THECB) should continue to work with the state's instructional and student services leaders in producing an annual report on transfer success to provide longitudinal data for effective analysis and planning.

Questioning whether community colleges are meeting the transfer needs of minority students, Pincus and Archer (1993) note that institutions do little to counter students' likely "short-term, pragmatic educational decisions leading to immediate employment rather than longer term decisions leading to career development" (p. 21). This occurs in spite of evidence that "more education leads to higher incomes, more highly skilled jobs, and better chances for upward mobility" (p. 23).

In a recent report on *Changing States: Higher Education and the Public Good* (1994), the Southern Regional Education Board shows that baccalaureate degree holders in 1990 earned an average of approximately $5,000 more annually than associate degree holders and $12,000 more annually than high school graduates.

What problems or obstacles have caused low numbers and rates of students transferring from two-year to four-year colleges and how might such problems be removed or mitigated? Tinto (1987) argues that student involvement in the academic and social life of a college—a weak factor for most community colleges—is positively associated with academic success and reduces likelihood of student attrition or drop-out.

Dougherty (1991) claims that while the transfer from community college to a four-year institution is a difficult move for most students, community colleges provide only "cursory and haphazard encouragement and advice for their transfer aspirants" (p. 317).

RECOMMENDATION 3: Texas community and technical colleges should commit themselves to full provision of student services and activities which promote student interest in and accomplishment of successful transfer from two-year to four-year colleges.

After transfer, students in the four-year colleges face potential obstacles as lack of financial aid, lack of adequate orientation and counseling, loss of credits, and inadequate preparation for tougher academic standards (Bernstein, 1986).

RECOMMENDATION 4: The THECB should promote opportunities for increased dialogue and partnerships between two-year and four-year college faculty and student services personnel to promote the transfer success of students.

After an analysis of more than 15,000 transcripts of community college students who transferred to 50 colleges and universities in 13 states, Palmer, Ludwig, & Stapleton (1994) noted three general trends:

- Students' exposure to the community college was substantial; more than half (57 percent) had earned at least 61 semester hours at community colleges; and 75 percent accumulated more than 48 semester hours there.
- Only 37 percent of the students earned the associate's degree before transferring.
- The students actually lost relatively few credits upon transferring to the baccalaureate-granting institutions. The median number of credits earned was 63, and the median number of credits accepted for transfer was 60.

Given these findings, the authors suggest that perhaps it is time to reexamine the purpose of the associate degree and the role of the community college in leading students to the baccalaureate. Perhaps, they argue, it is time to "structure transfer around an agreed-upon set of competencies students are expected to achieve as they proceed toward the baccalaureate," including the establishment of a "bridge transfer curriculum involving fewer than 60 semester hours" (pp. 17-18).

RECOMMENDATION 5: The THECB should facilitate core-to-core transfer or transfer of courses teaching state-identified core competencies from two-year to four-year colleges as part of the senior institution's core.

In *Transfer, Articulation, and Collaboration Twenty Five Years Later* (1990), Dorothy Knoell recognizes the growing need for articulation of community college vocational/ technical programs with university baccalaureate programs to provide the nation with technically skilled *and* more highly educated workers.

RECOMMENDATION 6: The THECB should investigate the current status and needs of community college technical programs which articulate with four-year college baccalaureate programs.

RECOMMENDATION 7: The THECB should consider a policy that allows associate degree holders to transfer to identified four-year college programs with junior-level standing.

Barkley (1993) argues for improved communication, collaboration, and cooperation among all colleges and universities in the articulation and delivery of higher education, especially through increased use of technology. She claims "more technology is needed to send and evaluate transcripts electronically, to maintain course equivalencies electronically, improve electronic library access, and establish one-stop registration for area students" (p. 40).

RECOMMENDATION 8: The THECB should serve as a clearinghouse for the electronic exchange of transcripts.

RECOMMENDATION 9: The THECB should promote the upgrading of colleges' technological infrastructure and expertise for the timely exchange and analysis of transfer data.

Pincus and Archer (1989) offer several recommendations in making community colleges *Bridges to Opportunity*, including restoring the transfer function to a "central role." Further, they argue for the creation of a community college culture emphasizing intellectual rigor and critical thinking; development of a vibrant on-campus learning community; establishment of effective transfer tracking systems and data bases; and aggressive promotion of pre-baccalaureate programs.

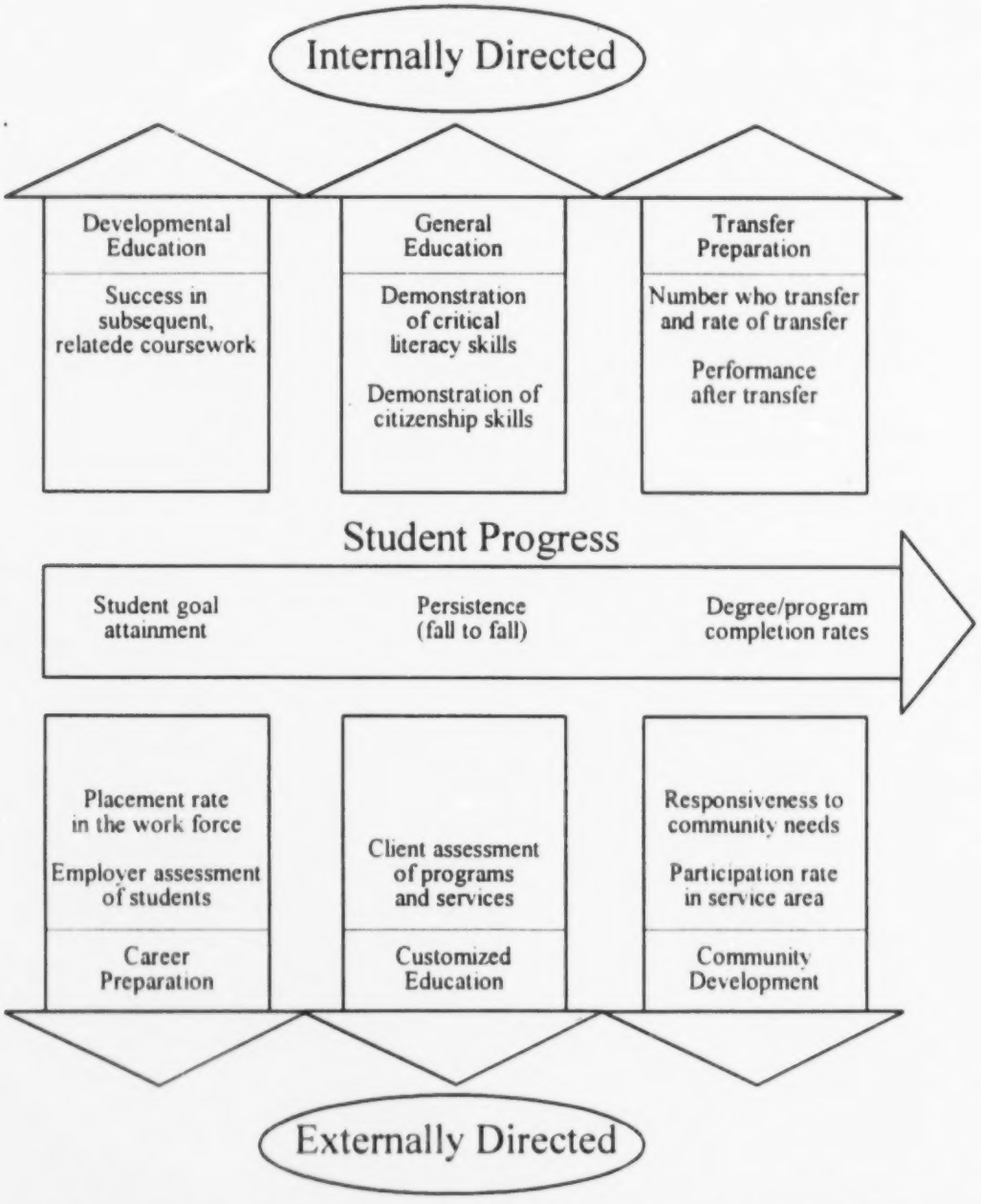
D. TRANSFER SUCCESS AND INSTITUTIONAL EFFECTIVENESS: TRANSFER SUCCESS OF STUDENTS IS A CORE INDICATOR OF INSTITUTIONAL EFFECTIVENESS.

The Community College Roundtable, a special purpose group of community college executive officers, university professors, and higher education officials, convened in late 1992 and early 1993 under the auspices of the American Association of Community Colleges to identify core indicators of institutional effectiveness for community colleges. The group specified 13 core indicators of student progress under six broad mission headings: career preparation, transfer preparation, developmental education, general education, customized education, and community development. Table 1, on the following page, is taken from the Roundtable report published in 1994 (p. 15).

The Roundtable report points out that two indicators commonly used to track transfer success are number and rate of students who transfer and performance of students after transfer. The report urges that colleges engage in continuous assessment to answer such questions as: Do students intend to transfer? Have students enrolled for more than one semester? Have students earned a designated amount of credit? Have students filed a degree plan? Have students completed a certificate or degree program?

To serve the broader goal of institutional effectiveness, the Roundtable report recommends that indicators of transfer success be comprehensively researched, regularly produced, publicly reported, and systematically used in decision making. The indicators must be credible to college personnel who are in a position to change institutional behavior, yet understood by and reflective of the concerns of external constituencies.

Table 1. Core Indicators of Institutional Effectiveness



Source: Community College Roundtable of the American Association of Community Colleges

II. INDICATORS OF TRANSFER SUCCESS

A. THE TRANSFER RATE: NATIONAL STUDIES

Before a transfer rate can be measured, it must be properly defined and understood. Depending upon the definition, a transfer rate could vary from as low as 5 percent (by dividing the number of transfers in a given year by the total college enrollment) to as high as 85 percent (by dividing the number of transfers by the number of students entering the college directly from high school, attending full-time, declaring an intent to transfer, and receiving the associate's degree). The results of the calculation depend upon how broadly or specifically the denominator is defined.

A definition which is too inclusive of the student population yields an absurdly low rate and unfairly suggests ineffectiveness on the part of the community college in transferring its students. On the other hand, if too many qualifiers are built in or inappropriately measured, the rate becomes suspiciously high and appears self-serving, undermining the credibility of the community colleges as serious investigators of transfer effectiveness.

Two major national groups are engaged in the study of a transfer rate definition: the Transfer Assembly Project and the National Effective Transfer Consortium (NETC). The Transfer Assembly Project, headed by Dr. Arthur M. Cohen of the Center for the Study of Community Colleges and funded by the Ford Foundation, uses the following definition: "All students entering the two-year college in a given year who have no prior college experience and who complete at least 12 college-credit units within four years, divided into the number of that group who take one or more classes at a public, in-state university within [the same] four years."

In 1994, the project tracked students who began college in 1988 in 395 colleges in 20 different states, including many institutions in Texas. The Transfer Assembly Project has been tracking students for five years and the results are shown in Table 2.

In 1995, the project will include results from 21 community colleges in Texas. These 21 colleges reported on first-time-in-college students in 1989. The colleges reported that 14,931 students from that group had achieved 12 semester credit hours or more within four years. Of those students, 3,425 transferred to in-state public universities within four years for a transfer rate of 22.9 percent. This rate is in line and slightly above the national average of the past two years.

The NETC, a consortium of 28 community colleges across the nation, calculates transfer rates by surveying students who leave the community college at a single point in time after earning a minimum of six college-level credit hours (excluding students who already have a bachelor's degree and those who are "reverse transfers" from senior institutions). These

"leavers" include students enrolled in a college's spring semester but who do not re-enroll in the following fall. Results from the NETC study show that the transfer rate for the 1988 cohort equalled 25 percent (Berman, 1990, and others).

Table 2. Transfer Assembly Project Results

Year	Number of colleges in study	Entrants first time in college	Entrants receiving 12+ credits w/in 4 years	Transfers to in-state, public univ's w/in 4 years	Transfer rate
1984	48	77,903	39,351	9,316	23.7%
1985	114	191,748	89,638	21,171	23.6%
1986	155	267,150	124,885	29,180	23.4%
1987	366	507,757	237,965	53,863	22.6%
1988	395	522,758	261,625	57,796	22.1%

Source: Transfer Assembly Project (1994)

In "The Transfer Rate Debate," Richard Fonte (1993) criticizes both the Transfer Assembly Project and NETC definitions for the following reasons: (1) the time frames are "unrealistically short" for part-time, working adult students; (2) student and curricular intent are inadequately addressed; and (3) neither places the transfer rate indicator within a broader context of transfer effectiveness. Fonte recommends that "multiple transfer rates based on differing methodologies should be considered rather than one single rate." The Transfer Success Work Group decided to follow Fonte's admonitions in calculation of a transfer rate(s) for Texas.

B. CALCULATING THE TRANSFER RATE(S) FOR TEXAS COMMUNITY COLLEGES

1. Introduction

In devising transfer rate(s) for Texas community colleges, the Transfer Success Work Group agreed to use ones that could be calculated from unit record information regularly reported to the Texas Higher Education Coordinating Board (THECB). That way, the THECB could calculate rate(s) for each community college. This decision meant that one of the most popular factors limiting the students in a study (completion of 12 non-remedial hours of course work) could not be used in Texas. The THECB

- collects hours attempted on census date;
- does not distinguish between remedial and non-remedial hours; and
- does not collect hours earned.

As a result, the work group agreed to include in the study only those students who, over time, had attempted at least 15 hours and who had attended their initial community college for at least two semesters. The group members believe that this would approximate the more commonly used 12 hours earned limitation and would still ensure some impact on the students by the community college.

As with the Transfer Assembly definition, this meant that transfers to private or out-of-state senior institutions could not be counted. Consequently the transfer rates recorded here are "minimums": only those students who transfer to public senior institutions in the state of Texas will be shown as having transferred.

2. Subjects

The work group believed strongly that longitudinal tracking techniques must be used when identifying transfer rates. With numerous part-time students enrolled, sufficient time must be allowed for students to transfer. The work group decided to use an Integrated Post-secondary Educational Data System (IPEDS) definition for a cohort:

- students enrolling summer 1990 as first-time in college students who attended the same community college fall 1990;
- students who enrolled fall 1990 as first-time in college students; and
- students still enrolled during fiscal year 1994 (fall 1993 or spring 1994) at the community college would be reported separately.

In an attempt to gain some measure of persistence of transfer students in the four-year institutions, the work group calculated the persistence rate for the number of transfer students who "persisted" or enrolled for at least two semesters in the four-year institution.

3. Results and discussion

The work group made a conscious decision not to report an overall single transfer rate for all community colleges in the state of Texas. Instead we have reported multiple transfer rates: for all Texas community and technical colleges (statewide rates) by student major; and for each individual Texas community and technical college by student major. Additionally, we computed statewide and individual college results for additional student groups: by type of major and gender; by type of major and ethnicity; and by type of major and age group.

Description of columns for Tables 3-6

First Time in College: Integrated Postsecondary Education Data System (IPEDS) fall 1990 students as described on page 12, section 2, "Subjects."

 # With 15 Hrs 2 Sem: Focus sub-population: those students attempting at least 15 credit hours and enrolling at the same community college for two or more semesters.

 # Enr in CTC FY 94: The number of students from column 2 still enrolled in a community or technical college during fall 1993 or spring 1994.

% Enr in CTC FY 94: The percent of students from column 2 still enrolled in a community or technical college during fall 1993 or spring 1994.

Cohort minus # Enr: The difference between columns 2 and 3 (students attempting at least 15 hours during at least two semesters at the same community college who were *not* enrolled in a community college during fall 1993 or spring 1994).

Trans to Sr Inst: The number of students from column 5 (Cohort minus # Enr) who transferred to a public senior institution in Texas.

Trans Rate %: The percent of students from column 5 who transferred to a public senior institution in Texas.

Trans or Still Enr %: The percent of students who transferred to a public senior institution in Texas or were enrolled at a public community or technical college in texas during fall 1993 or spring 1994.

% Persist: The percent of the students who transferred to a public senior institution in Texas who enrolled at that senior institution for two or more semesters.

TEXAS COMMUNITY COLLEGE TRANSFER STUDY—STATEWIDE TOTALS
FIRST-TIME-IN-COLLEGE FRESHMEN
SUMMER/FALL 1990 COHORT THROUGH SPRING 1994

Table 3. Transfer of Students by Type Major

Type Major	First Time in College	# With 15 Hrs. 2 Sem.	# Enr. in CTC FY '94	% Enr. in CTC FY '94	Cohort Minus # Enr.	Trans. to Sr. Inst.	Trans. Rate %	Trans. or Still Enr. %	% Persist
Academic	37,073	26,211	8,200	31.3	18,011	5,719	31.8	53.1	85.8
Technical	20,406	13,568	4,123	30.4	9,445	1,064	11.3	38.2	81.6
Undeclared	19,665	11,674	4,340	37.2	7,334	2,029	27.7	54.6	84.0
TOTAL	77,144	51,453	16,663	32.4	34,790	8,812	25.3	49.5	84.9

Source: TAJCCIA

Discussion of Table 3:

1. Nearly a third of the students from fall 1990 were still enrolled in a community college four years later. This emphasizes the importance of a longitudinal approach to the question of transfer rates and for allowing students sufficient time to complete the work they wish to pursue at public community and technical colleges before calculating a transfer rate. Future studies might address the question of whether length of time for transfer is dependent upon whether the student attends college on a full-time versus part-time basis.

2. One quarter of the students not still enrolled at a community or technical college transferred to a senior institution. While this finding is consistent with other studies (note the Transfer Assembly Project and NETC studies), this study adds to the literature a finding of substantial transfer rate differences depending on the major the student declared. Nearly one-third of the students declaring academic majors did transfer; only 11 percent of the students enrolled in technical majors transferred. Clearly this variable is a strong predictor of transfer behavior.

3. Nearly half the students were still enrolled in some form of public higher education in Texas. Over half of the academic majors and undeclared students were still enrolled.

4. Nearly 85 percent of the students who did transfer to senior colleges enrolled at those institutions for more than one semester.

For Tables 4-6, only students with academic majors are used so that emphasis can be directed to the variables of gender, ethnicitiy, and age group. The Transfer Success Work Group calculated all the rates (again by statewide average as well as by individual colleges) for students with technical and undeclared majors as well. Statewide averages on the latter groups or individual college data for Tables 4-6 are available from Dr. Charles M. Cook at the Texas Higher Education Coordinating Board, P.O. Box 12788, Austin, TX 78711.

Table 4 below contains the transfer rates for first-time-in-college students in summer/fall 1990 through spring 1994 by gender.

TEXAS COMMUNITY COLLEGE TRANSFER STUDY—STATEWIDE TOTALS
FIRST-TIME-IN-COLLEGE FRESHMEN
SUMMER/FALL 1990 COHORT THROUGH SPRING 1994

Table 4. Transfer of Academic Students by Gender

Gender	First Time in College	# With 15 Hrs. 2 Sem.	# Enr. in CTC FY '94	% Enr. in CTC FY '94	Cohort Minus # Enr.	Trans. to Sr. Inst.	Trans. Rate %	Trans. or Still Enr. %	% Persist
Female	20,440	14,507	4,761	32.8	9,746	2,968	30.5	53.3	85.8
Male	16,633	11,704	3,439	29.4	8,265	2,751	33.3	52.9	85.8
TOTAL	37,073	26,211	8,200	31.0	18,011	5,719	31.8	53.1	85.8

Source: TAJCCIA

Discussion: Table 4 indicates that in the academic cohort identified, female students outnumbered male students and they also remained enrolled at Texas community colleges in FY 1994 at a higher percentage. Male students transferred to public, in-state senior institutions at a higher rate, 33.3 percent versus 30.5 percent.

Table 5 below contains the transfer rates for first-time-in-college students in summer/fall 1990 through spring 1994 by ethnicity.

TEXAS COMMUNITY COLLEGE TRANSFER STUDY—STATEWIDE TOTALS
FIRST-TIME-IN-COLLEGE FRESHMEN
SUMMER/FALL 1990 COHORT THROUGH SPRING 1994

Table 5. Transfer of Academic Students by Ethnicity

Ethnicity	First Time in College	# With 15 Hrs. 2 Sem.	# Enr. in CTC FY '94	% Enr. in CTC FY '94	Cohort Minus # Enr.	Trans. to Sr. Inst.	Trans. Rate %	Trans. or Still Enr. %	% Persist
White	24,159	16,473	4,927	30.0	11,546	4,175	36.2	55.3	87.0
African-American	3,559	2,426	683	28.0	1,743	369	21.2	43.4	83.5
Hispanic	8,135	6,377	2,303	36.0	4,074	898	22.0	50.2	80.5
Asian-American	811	633	213	34.0	420	193	46.0	64.1	90.7
Native American	133	90	25	28.0	65	12	18.5	41.1	83.3
International	276	212	49	23.0	163	72	44.2	57.1	79.2
TOTAL	37,073	26,211	8,200	31.0	18,011	5,719	31.8	53.1	85.8

Source: TAJCCIA

Discussion: Table 5 indicates that in the cohort of academic students identified, whites constituted 65.2 percent, African-Americans constituted 9.6 percent, Hispanics constituted 21.9 percent, Asian-Americans constituted 2.2 percent, Native Americans constituted 0.4 percent, and international students constituted 0.8 percent. Hispanic students remained enrolled in community colleges in FY 1994 at the highest rate (36 percent), while international students remained enrolled at the lowest rate (23 percent). Of the students who transferred, Asian-American students had the highest rate (46 percent), and Native American students the lowest rate (18.5 percent).

Table 6 below contains the transfer rates for first-time-in-college students in summer/fall 1990 through spring 1994 by age group.

TEXAS COMMUNITY COLLEGE TRANSFER STUDY—STATEWIDE TOTALS
FIRST-TIME-IN-COLLEGE FRESHMEN
SUMMER/FALL 1990 COHORT THROUGH SPRING 1994

Table 6. Transfer of Academic Students by Age Group

Age Group	First Time in College	# With 15 Hrs. 2 Sem.	# Enr. in CTC FY '94	% Enr. in CTC FY '94	Cohort Minus # Enr.	Trans. to Sr. Inst.	Trans. Rate %	Trans. or Still Enr. %	% Persist
< 17	195	106	39	36.8	67	43	64.2	77.4	83.7
17-19	23,201	18,354	5,768	31.4	12,586	4,855	38.6	57.9	86.7
20-24	5,599	3,417	1,076	31.5	2,341	456	19.5	44.8	80.7
25-29	2,748	1,522	502	33.0	1,020	152	14.9	43.0	78.9
30-39	3,463	1,936	565	29.2	1,371	163	11.9	37.6	83.4
40-49	1,390	692	200	28.9	492	45	9.1	35.4	77.8
50-59	354	140	40	28.6	100	4	4.0	31.4	75.0
60-69	102	39	8	20.5	31	1	3.2	23.1	100.0
70 and up	21	5	2	40.0	3	0	0.0	40.0	0.0
TOTAL	37,073	26,211	8,200	31.3	18,011	5,719	31.8	53.1	85.8

Source: TAJCCIA

Discussion: Table 6 indicates that the majority of academic students fell into the 17-19 and 20-24 age groups (over twice as many students with academic majors appeared in these age groups than did students with technical majors). Eliminating the 70 and up age group, the age group with the highest percentage of students still enrolled in FY 1994 was 25-29. Eliminating the < 17 age group, the age group with the highest transfer rate was 17-19.

RECOMMENDATION 10: The THECB should conduct future studies to *examine the factors which contribute to differential transfer rates for students* according to their gender, ethnicity, and age groups.

In addition to variations listed above by student groups, the Transfer Success Work Group also found a wide variation in transfer rates among the individual community colleges in the state. The Work Group speculated on possible causes for this variation:

- proximity to a public senior college
- proportion of full-time students at the community college
- sensitivity of the local senior college to the needs of part-time students
- amount of remediation needed by students served at the community college
- proximity of the community college to private or out of state senior institutions
- effectiveness of the advising function at the community college in helping students understand whether they wish to transfer
- effectiveness of the transfer officer at the community college in helping students identify appropriate courses for transfer to specific senior institutions

RECOMMENDATION 11: The THECB should conduct future studies to examine possible factors contributing to variations in transfer rates among the individual community colleges in the state.

C. RATES OF STUDENT TRANSFER AT DIFFERENT STAGES OF ACADEMIC PROGRESS

Much of the literature on transfer effectiveness demonstrates that the more hours a student accumulates at the community college, the greater the likelihood of success in transferring. In a study of *Transfer Outcomes in Washington Community Colleges* (1994), Loretta Seppanen of the Washington State Board for Community and Technical Colleges argues

that the chief negative influence on transfer rates is very early attrition. As Seppanen notes, "in order to transfer, the student must be retained sufficiently to prepare for transfer" (p. 8). Along that line of argument, Seppanen shows that the transfer rate for students progressively increases as those students complete various thresholds: completion of 18 quarter credits; completion of 18 credits and the first college-level English course; completion of 18 credits and the first college-level math course; and finally, completion of the associate degree.

Seppanen concludes that students who make "substantial progress" (defined as completion of at least four quarters within two years) do well at transfer and are likely to get the baccalaureate degree. She emphasizes that it is the point of transition *into* the community college (the first quarter), not transition to the four-year college, with the greatest "leakage" or loss of students (35 per cent of all part-time degree seeking students in Washington community colleges leave after just one quarter in school).

Research on student retention, especially for minority students, shows that community colleges should devise strategies which promote students' success in terms of greater: (1) academic integration (study skills workshops, collaborative learning opportunities, etc.); (2) educational goal commitments (advising programs, transfer centers, etc.); (3) social integration (targeted extracurricular activities, peer networks, etc.); and (4) financial assistance (scholarships, work-study jobs, etc.) (Nora, 1993). Improvement of student retention is a necessary first step toward improvement of transfer rates.

RECOMMENDATION 12: Texas community and technical colleges must commit themselves to improvement of student retention rates.

Dr. Richard Bailey, Director of Planning and Research for the San Jacinto College District, tested Seppanen's theory of increased transfer rates for students who achieve higher stages of academic progress in the community college. He found that the theory held true for the fall 1990 first-time-in-college students at the San Jacinto College District. The percentage of the San Jacinto cohort who transferred to senior institutions by FY 1994 increased from 22.6 percent of those earning more than 12 semester credit hours; to 33.2 percent of those who earned more than 12 semester credit hours and received grades of A to C in English Composition I; to 40.3 percent of those who earned more than 12 semester credit hours and received grades of A to C in College Algebra; to 44.3 percent of those who earned more than 12 semester credit hours and received grades of A to C in English Composition I and College Algebra.

Dr. Stanley I. Adelman, Director of Institutional Research for Amarillo College, tracked first-time-in-college students at Amarillo College between fall 1989 and fall 1992 and who subsequently transferred to West Texas A&M University. He found that 79.7 percent of the

transfer students had grade point averages (GPAs) of 2.0 or above. Further, Dr. Adelman found that the longer students stayed at the community college, the more likely they were to succeed at the senior institutions.

Community College Hours Earned	Percent With Senior College GPA of 2.0 or above
12 to 30	71.4%
31 to 60	82.5%
60 and up	86.5%
Entire group	79.9%

Source: Stanley I. Adelman, Amarillo College

Of further interest, Dr. Adelman reported that for 86 students who began their college career at West Texas A&M University, transferred to Amarillo College, and then returned to the same senior institution, their senior college performance after transfer was significantly higher than their senior college performance prior to transfer.

	Percent With Senior College GPA of 2.0 or above
Senior college performance *prior to* transfer	66.3%
Senior college performance *after* transfer	83.7%

Source: Stanley I. Adelman, Amarillo College

The results could be interpreted that for these students, the community college experience was quite beneficial in terms of its effect on the students' senior college performance.

RECOMMENDATION 13: The THECB should assist in the development of a reporting system wherein four-year colleges provide regular, uniform data back to the two-year colleges, using a standard method of calculating students' grade point average, and including comparisons with native students.

A report that is currently being prepared by Texas A&M University (TAMU) looks at students of community colleges who transferred credit and enrolled in a TAMU course which had as a prerequisite either that credit or the preceding course in a series. The data in the report are for students enrolled at TAMU in the 1992-93 and 1993-94 academic years and the 1994 fall semester. The report allows community colleges to see the performance of their former students compared to those who completed the prerequisite or preceding course at another institution or at TAMU. For information on the report, contact Harvey Striegler, Associate Director of Admissions, Texas A&M University, College Station, Texas 77843.

D. ACADEMIC SUCCESS AND PERSISTENCE RATES OF TRANSFER STUDENTS IN SENIOR INSTITUTIONS

In the mid-1980s, the Alliance for Higher Education (AHE), a consortium of colleges and universities in North Texas, developed and put into operation the Electronic Transcript Network (ETN). This system includes a file format originated by AHE and used to send transcript files over the network. Several community colleges joined the ETN system in the late 1980s. Prior to the ETN (and currently for those community colleges which are not members), transcript exchanges between senior institutions and community colleges consisted of paper copies, making analysis burdensome and complicated.

In 1992, Dr. Don Pugh, Dean of Academic Education at Brazosport College, conceived the idea for the Texas Higher Education Project for the Exchange of Transcripts (THEPET). Using THEPET has resulted in software by which ETN transcript data received from other institutions can be merged with local transcript data to form merged transcript files on a given set of students. One use of the resulting merged file is the tracking of student performance from two-year to four-year institutions. THEPET also permits tracking from a specific course to another specific course.

In 1992, Brazosport College and the San Jacinto College District conducted an informal pilot of the THEPET programs by analyzing transcripts of their respective transfers to the University of Texas (UT) and Texas A&M University (TAMU). In 1993, Brazosport, San Jacinto, Amarillo College, Blinn College, and the North Harris Montgomery College District conducted a more formal pilot, looking at transcripts of their students who had transferred to UT, TAMU, the University of Houston, Sam Houston State University, and West Texas A&M University. Overall results indicate that community college transfer students earned a GPA of approximately 0.5 less at the university than at the community college and persisted through course work at a rate approximately 10 percent less at the university than at the community college.

A major complication in the current use of THEPET is the need for each individual community college to seek data from each of the various senior institutions. The LONESTAR Users Group has proposed that the Texas Higher Education Coordinating Board (THECB) act as a clearinghouse in the transcript exchange process. This process would take place as follows:

- The THECB would build a file of students (identified by social security number) who have transferred from Texas community and technical colleges to public four-year colleges and universities in Texas.
- The THECB would sort the file by senior institutions.
- The THECB would send to each senior institution the sorted file of their transfer students.
- The senior institution would send an electronic transcript of their transfer students back to the THECB.
- The THECB would sort the electronic transcripts of transfer students by community and technical colleges.
- The THECB would send to each community and technical college the electronic transcripts of their students who transferred to public four-year colleges and universities in Texas.
- The community college would use the electronic transcripts to conduct appropriate analyses (comparisons of overall community college versus senior institution GPAs; course to course grade comparisons; etc.).

III. TRANSFER SUCCESS SURVEY

In October 1994, the Transfer Success Work Group conducted a survey of two-year college instructional administrators and student services officers to determine current practices and perceptions regarding transfer of two-year college students to four-year colleges in the state of Texas.

The first part of the survey consisted of three columns labelled A, B, and C. In Column A, respondents checked those factors currently provided by their college. In Column B, respondents rated each factor (whether provided by their college or not) in terms of the degree to which they agreed it contributed to transfer success, with 5=strongly agree; 4=somewhat agree; 3=neutral; 2=somewhat disagree; and 1=strongly disagree. Column C listed several factors which could potentially contribute to the success of a community college's transfer function.

Surveys were sent to all 70 community and technical colleges in Texas. Seventy-five individuals, representing 53 institutions, responded to the survey (representing a 76 percent institutional response rate). Of the respondents, 40 were instructional administrators, 28 were student services officers, and seven were researchers. Twelve institutions are represented in the survey by more than one respondent. Of these, seven institutions had two respondents, two had three respondents, two had four respondents, and one institution requested that all division deans respond, resulting in six responses from that college.

Summary results are presented in the tables below. Table 7 lists the percentage of respondents indicating each factor as provided by their college. The factors are listed in descending order of percentages, with the most popular or frequently used factors listed first. Table 8 lists the overall ratings of importance attached to factors contributing to the success of a community college's transfer function. The factors are listed in descending order of numerical ratings, with the most important factors listed first.

Table 7. Factors Currently Provided by Texas Community Colleges Contributing to the Success of the Transfer Function

% of Respondent Indicating College Currently Provides	Factors Contributing to the Success of a Community College's Transfer Function
89.33	Tutoring Services
88.00	Transfer Counseling
86.67	Required Assessment of Students
86.67	Visits by Senior Institution Representatives (College Fairs, Transfer Days, etc.)
85.33	Formal articulation agreements with senior institutions
85.33	Interest/aptitude testing
85.33	High school outreach/recruitment of potential transfer students
85.33	Personal counseling
82.67	Career information center
81.33	Required course placement of students
78.67	Orientation/study skills courses
78.67	Career exploration workshops/seminars
78.67	Use of Texas Common Course Numbering System
77.33	Faculty advising
70.67	Early identification of transfer students upon enrollment in college
57.33	Feedback provided by senior colleges on transfer students
54.67	Workshops/seminars for students on transfer opportunities/advice
53.33	Student organizations, clubs which promote study or career interests
53.33	Clear identification of educational outcomes in courses and programs

% of Respondent Indicating College Currently Provides	Factors Contributing to the Success of a Community College's Transfer Function
53.33	Faculty articulation conferences with senior institutions
53.33	Systematic checks on student attendance and progress
48.00	Honors courses
45.33	Identification and promotion of technical transfer courses and programs
44.00	Financial aid workshops/opportunities for transfer students
42.67	Transfer scholarships
41.33	Use of common calendar by Texas colleges
41.33	Designated transfer office/officer
36.00	Provision of field trips, tours, or other direct contacts for students to senior institutions
34.67	Establishment of effective system to track transfer students and document success
34.67	Electronic exchange of transcripts
33.33	Faculty mentoring
29.33	Visits by former students who have successfully transferred
22.67	Peer mentoring
16.00	Faculty exchanges
14.67	Departmental activities for transfer students

Table 8. Perceived Importance of Factors Contributing to the Success of a Community College's Transfer Function

Rating of factor importance (on scale of 1-5, with 5=strongly agree)	Factors Contributing to the Success of a Community College's Transfer Function
4.6	Use of Texas Common Course Numbering System
4.5	Transfer counseling
4.5	Establishment of effective system to track transfer students and document success
4.4	Formal articulation agreements with senior institutions
4.4	Feedback provided by senior colleges on transfer students
4.4	Required assessment
4.3	Faculty articulation conferences with senior institutions
4.3	Early identification of transfer students upon enrollment
4.2	Electronic exchange of transcripts
4.2	Faculty advising
4.2	Visits by Senior Institution Representatives (College Fairs, Transfer Days, etc.)
4.1	Transfer scholarships
4.1	Required course placement of students
4.1	Tutoring services
4.1	Workshops/seminars for students on transfer opportunities/advice
4.1	Career information center
4.1	Identification and promotion of technical transfer courses and programs
4	Financial aid workshops/opportunities for transfer students

Rating of factor importance (on scale of 1-5, with 5=strongly agree)	Factors Contributing to the Success of a Community College's Transfer Function
4	Clear identification of educational outcomes in courses and programs
4	Use of common calendar by Texas colleges
4	High school outreach/recruitment of potential transfer students
4	Career exploration workshops/seminars
4	Faculty mentoring
3.9	Orientation/study skills courses
3.8	Designated transfer office/officer
3.8	Visits by former students who have successfully transferred
3.7	Interest/aptitude testing
3.7	Peer mentoring
3.7	Provision of field trips, tours, or other direct contacts for students to senior institutions
3.7	Systematic checks on student attendance and progress
3.7	Departmental activities for transfer students
3.7	Student organizations, clubs which promote study or career interests
3.6	Personal counseling
3.4	Honors courses
3.3	Faculty exchanges

DISCUSSION OF THE TRANSFER SUCCESS SURVEY

An interesting observation is an apparent discrepancy between the occurrence of certain factors at community colleges and their perceived importance. For example, the "establishment of effective system to track transfer students and document success" was rated as the third most important factor; yet it ranked 27th among factors actually in place, utilized by only 35 percent of respondents. This might indicate a desire to implement such a system, but an inability to do so and a need for greater state guidance and help.

Another factor ranking high in importance (ninth place), the "electronic exchange of transcripts," ranked 30th in application, also utilized by only 35 percent of respondents. Many colleges have expressed an interest in this service, but have claimed lack of knowledge and technological infrastructure as impediments.

Yet another factor ranking high on the list in perceived importance, tying for fourth place, "feedback provided by senior colleges on transfer students," is currently provided at only 57 percent of the community colleges.

Another interesting observation is the low ratings on both scales given to such services as student organizations, departmental activities, and clubs which promote study or career interests. Since the literature on transfer success emphasizes such factors, colleges should promote their use on campus. In a recent study of *What Matters in College?* (1993), Alexander Astin concludes that "the student's peer group is the single most potent source of influence on growth and development during the undergraduate years" (p. 398).

In addition to the ratings of factors contributing to transfer success, community colleges were asked to respond to three open-ended questions or statements on the survey: (1) Do you currently assess (measure) the transfer function of your college? If so, how? (2) Please list any factors which you perceive as obstacles or barriers to the successful transfer of community college students to senior institutions; and (3) In what ways could the Coordinating Board help promote the transfer success of community college students?

(1) Assessment of Transfer Function: "Do you currently assess (measure) the transfer function of your college?"

Yes: 43 (61 percent) No: 28 (39 percent) No Response: 4

If yes, how?

#1 College transcripts and statistical reports back from senior institutions (13 respondents).

#2 Faculty input—getting together with senior college counterparts (10 respondents).

#3 Student follow-up (9 respondents).
- a. Student input—informal or through surveys.
- b. Automated Student Follow-up.

#4 External reports (3 respondents).
- a. National studies (Ford Foundation Transfer Assembly Project).
- b. Migration report from the THECB.
- c. THEPET.

#5 Lonestar Tracking System (1 respondent).

(2) Perceived obstacles/barriers to the successful transfer of community college students to senior institutions:

#1 Equivalent courses not accepted in transfer (27 respondents).
- a. Lack of adoption of common course numbering system (14).
- b. Technical courses not transferring (4).
- c. Specific courses (especially freshman English and government) either not transferred or transferred differently to senior institutions (4).
- d. Courses moved to upper-level status by senior institutions (5).

#2 Lack of adequate assistance and support at the university for transfer students, both in getting into the university and in adapting to the university (20 respondents).

#3 Cost of attending the university/lack of scholarships for transfer students/lack of financial aid information/few jobs for transfer students (17 respondents).

#4 Lack of articulation agreements/no directed effort to promote the development of articulation agreements/information about existing articulation agreements not shared throughout the university (14 respondents).

#5 Community college student behavior: stopping out, lack of goals, changing majors, switching colleges (12 respondents).

#6 Lack of a universal core or senior college cores which list specified courses to complete rather than exemplary outcomes (8 respondents, 1 person identified the lack of a statewide policy on acceptance of associate degrees as fulfilling core requirements).

#7 Inconsistent evaluation of transfer courses within the university. No standardized acceptance of courses department to department or administrator to administrator (8 respondents).

#8 University practice of changing transfer admission requirements or degree requirements without adequate notice to community colleges (8 respondents).

#9 Admissions requirements keep students out/ deadlines for admission inflexible/ enrollment caps (4 respondents).

#10 Miscellaneous reasons (2 respondents).
- a. Community college faculty don't have adequate information about the transfer process.
- b. Distance to universities.
- c. Lack of on-going study of transfer rate and success of transfer students—difficult to get feedback information from senior institutions.
- d. No regular, periodic meetings/dialogue between two- and four-year colleges.
- e. Universities don't recruit on campus or provide organized tours for transfer students.

#11 Miscellaneous reasons, each identified by 1 respondent:
- a. Students lack of success in English and math courses.
- b. Variation in degree requirements for the same degree from institution to institution.
- c. Lack of programs of study/evening courses at universities.
- d. Fear by universities that two-year college students are underprepared.

(3) How can the Coordinating Board help promote transfer success of two-year college students?

#1 Encourage adoption and full use of the Texas Common Course Numbering System to the extent that courses identified with common course numbers transfer to all state-supported senior colleges (22 respondents).

#2 Assist in the development of a reporting system wherein four-year colleges provide uniform data back to the two-year colleges, using a standard method of calculating GPA and including comparisons with native students. Serve as a clearinghouse for the electronic exchange of transcripts (18 respondents).

#3 Facilitate core-to-core transfer. Develop a policy that allows associate degree

holders to transfer with junior-level standing to appropriate programs (14 respondents).

#4 Promote statewide, comprehensive articulation agreements (11 respondents).

#5 Create opportunities for dialogue between two-year and four-year college faculty/promote partnerships/encourage senior institutions to become more "user friendly" to the two-year transfer student and more sensitive to the needs of working adults (10 respondents).

#6 Miscellaneous suggestions, each identified by one or two respondents:
- a. Develop a transfer rate.
- b. Fund human development and orientation courses as college-level courses.
- c. Encourage/promote associate degree completion.
- d. Encourage senior institutions to provide scholarships to transfer students.
- e. Require strict adherence to Texas Academic Skills Program (TASP) rules.
- f. Clarify core curriculum policies.
- g. Promote an understanding of Tech Prep and dual credit at four-year colleges to ensure that students who have these credits can transfer them.

IV. INDIVIDUAL COLLEGE GUIDELINES FOR ASSESSMENT OF TRANSFER SUCCESS

First and foremost, individual colleges must collect and maintain data on their students.

- **Keep track of student goals**. Do students intend to transfer? Since student intentions change, ask this question often to ensure accuracy of information. If student goals are known, transfer courses, counseling, and services may be more effectively planned and delivered.

- **Keep track of student retention**. Have students enrolled for more than one semester? If not, why not? Survey those students who have not to discover their reasons and what the college might do to encourage their return and support their continued attendance to graduation or transfer.

- **Keep track of student progress**. Have students been properly assessed? counseled? placed in correct courses? How much credit have students earned? Have they filed a degree plan? To what factors do successful students attribute their accomplishments?

- **Keep track of student completers and transfers**. When did students transfer? Survey transfer students to seek feedback on their current academic progress and how well they feel their community college experiences prepared them for their subsequent academic endeavors.

An excellent model for a survey of transfer students is contained in *A transfer study: 1990 follow-up of former Johnson County Community College students currently enrolled at four-year colleges or universities*, produced by JCCC of Overland Park, Kansas. Colleges should keep abreast of services available in-state, such as TEX-SIS and LONESTAR, to track students, and especially, keep abreast of changing technology.

Dr. Jim Reed's Texas Student Information Systems (TEX-SIS) conducts follow-up surveys of graduates for participating community colleges. TEX-SIS prepares a report of student responses concerning their educational experiences and current occupational or transfer situation. Further information might be obtained by contacting Dr. Jim Reed, Student Information Services, 610 W. Seventh Avenue, Corsicana, Texas 75110.

Another good source of transfer information for colleges is the annual fall-to-fall Migration Report published by the Coordinating Board. In the Migration Report, the Coordinating Board tracks all community college students from a selected fall semester to any public institution the following fall semester. Students are classified by major, gender, and

ethnicity in the beginning fall semester and reported the next fall as present in: the same institution; other CTCs; other senior institutions; more than one institution concurrently enrolled, none of which are the original institution; or cannot locate. A detailed Migration Report may be prepared upon institutional request to the Coordinating Board.

Brazosport College and Dallas County Community College District have been instrumental in development of the LONESTAR project, a software system for Longitudinal Evaluation, Student Tracking, and Reporting. The primary goals of the project are to provide each community and technical college in the state of Texas with the:

- ability to determine longitudinal enrollment, retention, and success patterns for their own students;
- ability to link their students' educational activities with later or concurrent success in additional education and employment; and
- means to store, retrieve, and analyze a variety of existing student information using simple but powerful relational database technology and ad hoc query tools.

LONESTAR+ is an expanded version of the project, seeking to merge LONESTAR data with special population, campus services, and other related data. The LONESTAR Users' Group meets twice a year in Austin. Further information might be obtained by contacting Project Director Ron Parker at Brazosport College, 500 College Drive, Lake Jackson, Texas 77566.

If not already connected to the INTERNET, colleges will be increasingly "left behind" as more and more information becomes available electronically. The THECB maintains a gopher which serves as a menu of information available on Texas higher education to interested users. Items available on the THECB include transfer guides.

The Transfer Guides Project of the Texas Common Course Numbering System provides transfer guides from Texas four-year colleges and universities. The transfer guides are produced by the four-year institutions in subject or degree areas and contain lower division courses (listed by Texas Common Course Numbers) that count toward the baccalaureate degree and are transferrable from the community college. A community college counselor using Internet may thus custom-tailor a lower-division degree plan for students desiring to transfer in a particular subject to a particular university. An early proponent and developer of transfer guides for the University of Texas at Austin is Keith A. Baird, Assistant to the Director of Admissions, University of Texas at Austin, Austin, Texas 78712.

RECOMMENDATION 14: The THECB should encourage adoption and full use of the Texas Common Course Numbering System (TCCNS) by all Texas colleges and universities.

RECOMENDATION 15: The THECB should encourage all four-year colleges and universities to participate fully in the Texas Common Course Numbering System (TCCNS) Transfer Guides Project (the electronic listing via the THECB gopher of transfer guides by subject area using the TCCNS).

V. CONCLUDING REMARKS AND LIST OF RECOMMENDATIONS FOR INDIVIDUAL COLLEGE AND STATE ACTION

Trends in Texas point to an increasing number and percentage of postsecondary students enrolling in the state's community colleges. Changing demographics are producing an expanding pool of economically and/or educationally disadvantaged students. A changing economy is requiring more workers to seek greater or updated training and education. Many, if not most, of these new students are choosing the community colleges because of their relative advantages in access and cost.

Community colleges should insure that the transfer function is an effective one, providing students increased pathways to success in their academic and career development. Effectiveness begins with a comprehensive assessment to determine current status and provide valuable feedback about how the transfer function in Texas community and technical colleges may be improved. Based upon these concerns and the findings of this report, the Transfer Success Work Group offers the following recommendations for individual college and state action.

RECOMMENDATION 1: Texas community and technical colleges must collect and maintain data to identify specific problems and improve results of student transfer from two-year to four-year colleges.

RECOMMENDATION 2: The Texas Higher Education Coordinating Board (THECB) should continue to work with the state's instructional and student services leaders in producing an annual report on transfer success to provide longitudinal data for effective analysis and planning.

RECOMMENDATION 3: Texas community and technical colleges should commit themselves to full provision of student services and activities which promote student interest in and accomplishment of successful transfer from two-year to four-year colleges.

RECOMMENDATION 4: The THECB should create opportunities for increased dialogue and partnerships between two-year and four-year college faculty and student services personnel to promote the transfer success of students.

RECOMMENDATION 5: The THECB should facilitate core-to-core transfer or transfer of courses teaching state-identified core competencies from two-year to four-year colleges as part of the senior institution's core.

RECOMMENDATION 6: The THECB should investigate the current status and needs of community college technical programs which articulate with four-year college baccalaureate programs.

RECOMMENDATION 7: The THECB should support a policy that allow associate degree holders to transfer to identified four-year college programs with junior-level standing.

RECOMMENDATION 8: The THECB should serve as a clearinghouse for the electronic exchange of transcripts.

RECOMMENDATION 9: The THECB should promote the upgrading of colleges' technological infrastructure and expertise for the timely exchange and analysis of transfer data.

RECOMMENDATION 10: The THECB should conduct future studies to examine the factors which contribute to differential transfer rates for students according to their gender, ethnicity, and age groups.

RECOMMENDATION 11: The THECB should conduct future studies to examine possible factors contributing to variations in transfer rates among the individual community colleges in the state.

RECOMMENDATION 12: Texas community and technical colleges must commit themselves to improvement of student retention rates.

RECOMMENDATION 13: The THECB should assist in the development of a reporting system wherein four-year colleges provide regular, uniform data back to the two-year colleges, using a standard method of calculating students' grade point average, and including comparisons with native students.

RECOMMENDATION 14: The THECB should encourage adoption and full use of the Texas Common Course Numbering System (TCCNS) by all Texas colleges and universities.

RECOMMENDATION 15: The THECB should encourage all four-year colleges and universities to participate fully in the TCCNS Transfer Guides Project (the electronic listing via the THECB gopher of transfer guides by subject area using the TCCNS).

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